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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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020790 WM01/0621
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EXAMINER

CORSARO, N

ART UNIT

PAPER NUMBER

2684

DATE MAILED:

06/21/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/127,276

Applicant(s)

Ronald L. Mahany

Examiner

Nick Corsaro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on May 8, 2001

2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-17 is/are pending in the application

4a) Of the above, claim(s) _____ is/are withdrawn from consideration

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-17 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

20) ☐ Other:

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Response to Amendment

Response to Arguments

1. Applicant's arguments filed 05/08/2001 have been fully considered but they are not persuasive.

The applicants feature in the claims wherein a wireless communication system has a plurality of wireless devices, that together participate in a first roaming network when in range of one another and at least two of the devices when moved out of range of the others automatically attempting to establish a second wireless network, reads on Lynn in view of Borgstahl and Ramanathan, as follows.

Lynn states a wireless network with dynamic addressing including a plurality of wireless devices, such as computers, printers or any other network resource or device, wherein the devices communicate over wireless interface. Lynn states that the devices form a wireless network when within range of one another. Lynn states that the devices form an arbitrary network when within range of one another transceivers, and thus Lynn is stating that the nodes can roam and therefore the network is a roaming network. Lynn states that at least two nodes will form the network, such as two wireless computers in order to form a chain for communication to another node such as a wireless printer, and therefore Lynn inherently states that the nodes may roam and will attempt to form another network. Lynn is modified by Borgstahl in that Borgstahl shows wireless data

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networking wherein the nodes form a peer to peer network when the nodes are within range of each other such that nodes within one network can roam away from the other network, and any two compatible nodes can form a network. Ramanathan is modifies Lynn and Borgstahl to show that any of the nodes could be a beaconing node.

The applicants argument that one of ordinary skill in the art would not arrive at the combination of the references, is not persuasive in that both Lynn and Borgstahl are disclosing wireless data networks, namely wireless LAN's. The Lynn reference discloses a wireless LAN with dynamic addressing wherein the nodes can roam and connect to the LAN or two node can communicate, however Lynn only implies that two nodes could form a standalone network by dynamic addressing. Borgstahl discloses a modification of the typical wireless LAN wherein Borgstahl explicitly states a modification to the addressing scheme is necessary simplify the overhead involved in addressing and thus allowing two nodes to roam and form a network based on their compatibility. Therefore one of ordinary skill in the art would use the Borgstahl modification on any wireless LAN, such as that taught by Lynn, to simplify addressing and connectivity to allow formation of stand alone networks. The Ramanathan references can be used because all wireless systems broadcast or beacon, wherein Ramanathan shows another wireless LAN where beaconing responsibilities are shared by any node.

Therefore, the applicants features are not written specifically enough, or the features are not linked well enough, within the independent claims, to show a clear difference between the claims and the cited art.

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Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn et al. (5,745,699) in view of Borgstahl et al. (6,069,896).

Consider claim 1, Lynn discloses a wireless communication system comprising: a plurality of wireless devices (12, figure 1), each wireless device including a radio, that together participate in a first wireless roaming network when within range of one another (see col. 4 lines 10-26, col. 2 lines 13-31). Lynn discloses that the stations automatically configure themselves in to a data network when within range of each other (see col. 1 lines 30-67, col. 2 lines 13-24, col. 5 lines 59-67, and col. 6 lines 1-48). Lynn does not explicitly teach at least two of the plurality of wireless devices, when moved out of range of the other of the plurality of wireless devices, automatically attempting to establish a second wireless roaming network to support communication between the at least two of the plurality of wireless devices. Borgstahl teaches at least two of the plurality of wireless devices, when moved out of range of the other of the plurality of wireless devices, automatically attempting to establish a second wireless roaming network to support communication between the at least two of the plurality of wireless devices (see col. 1 lines 5-8, col. 2 lines 65-67, col. 3 lines 12-20, col. 3 lines 27-32, col. 3 lines 1-33,

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col. 11 lines 49-61, and col. 12 lines 1-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lynn, and have at least two of the plurality of wireless devices, when moved out of range of the other of the plurality of wireless devices, automatically attempting to establish a second wireless roaming network to support communication between the at least two of the plurality of wireless devices, as taught by Borgstahl, thus allowing small personal area networks to be formed when two or more devices are within range of reach other.

Consider claim 2, Lynn does not disclose at least one of the other of the plurality of wireless devices attempts to maintain operation of the first wireless roaming network. Borgstahl teaches at least one of the other of the plurality of wireless devices attempts to maintain operation of the first wireless roaming network (see col. 3 lines 12-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lynn, and have at least one of the other of the plurality of wireless devices attempts to maintain operation of the first wireless roaming network, as disclosed by Borgstahl, thus allowing small personal area networks to be formed when two or more devices are within range of reach other.

Consider claim 3, Lynn discloses at least one of the other of the plurality of wireless devices attempts to identify whether any of the plurality of wireless devices are not participating on the first wireless roaming network (see col. 7 lines 17-26).

Consider claim 4, Lynn does not disclose the at least one of the other of the plurality of wireless attempts to rescue any of the plurality of wireless devices that are not participating on

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the first wireless roaming network. Borgstahl discloses the at least one of the other of the plurality of wireless attempts to rescue any of the plurality of wireless devices that are not participating on the first wireless roaming network (see col. 6 lines 28-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lynn, and have at least one of the other of the plurality of wireless devices attempt to rescue any of the plurality of wireless devices that are not participating on the first wireless roaming network, as shown by Borgstahl, thus allowing roaming devices to connect to a personal area network within range.

Consider claim 5, Lynn does not disclose the radios of the plurality of wireless devices utilize frequency hopping transmission sequences, and the attempt to rescue involves visiting at least one frequency of the frequency hopping transmission sequences more often than the other frequencies of the frequency hopping transmission sequences. Borgstahl discloses the radios of the plurality of wireless devices utilize frequency hopping transmission sequences and the attempt to rescue involves visiting at least one frequency of the frequency hopping transmission sequences more often than the other frequencies of the frequency hopping transmission sequences (see col. 3 lines 53-57, and col. 2 lines 1-12, and col. 6 lines 8-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lynn, and have the radios of the plurality of wireless devices utilize frequency hopping transmission sequences and the attempt to rescue involves visiting at least one frequency of the frequency hopping transmission sequences more often than the other frequencies of the

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frequency hopping transmission sequences, as shown by Borgstahl, thus allowing roaming devices that are not connected to connect to a personal area network.

Consider claims 6 and 7, Lynn does not disclose any of the plurality of wireless devices that determine that they no longer participate on the first wireless roaming network attempt to reconnect to the first wireless local area network. Borgstahl discloses any of the plurality of wireless devices that determine that they no longer participate on the first wireless roaming network attempt to reconnect to the first wireless local area network (see abstract lines 3-5, and col. 3 lines 7-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lynn, and have any of the plurality of wireless devices that determine that they no longer participate on the first wireless roaming network attempt to reconnect to the first wireless local area network, as shown by Borgstahl, thus allowing roaming devices that are not connected to connect to the original personal area network.

Consider claims 11 and 12, Lynn does not disclose a higher power wireless link independent from the first and second wireless roaming networks, and at least one of the plurality of wireless devices communicates with the higher power wireless link. Borgstahl discloses a higher power wireless link independent from the first and second wireless roaming networks, and at least one of the plurality of wireless devices communicates with the higher power wireless link (see col. 4 lines 31-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lynn, and have a higher power wireless link,

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as shown by Borgstahl, thus allowing roaming devices to connect to public LANs or phone systems.

Consider claim 13, Lynn does not disclose the at least two of the plurality of wireless devices rejoin the first wireless roaming network when moving within range of the others of the plurality of wireless devices. Borgstahl discloses at least two of the plurality of wireless devices rejoin the first wireless roaming network when moving within range of the others of the plurality of wireless devices (see col. 3 lines 8-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lynn, and have at least two of the plurality of wireless devices rejoin the first wireless roaming network when moving within range of the others of the plurality of wireless devices , as shown by Borgstahl, thus allowing roaming devices to reconnect to the original personal LAN when with in range.

Consider claims 14 and 15, Lynn does not disclose the plurality of wireless devices are portable terminals with removable battery and initiate operation of the first wireless roaming network through reduced power transmissions. Borgstahl discloses the plurality of wireless devices are portable terminals with removable battery and initiate operation of the first wireless roaming network through reduced power transmissions (see col. 3 lines 58-67, and col. 4 lines 1-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lynn, and have the plurality of wireless devices be portable terminals with removable batteries, and initiate operation of the first wireless roaming network

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through reduced power transmissions, as shown by Borgstahl, thus allowing roaming devices that operate on batteries to conserve power by initiating close proximity LAN's.

Consider claim 16, Lynn discloses proximity and range as a factor in wireless roaming networks (see col. 2 lines 13-24). Lynn does not explicitly disclose the devices initiate operation in the first wireless network when in close proximity to one another. Borgstahl discloses the devices initiate operation in the first wireless network when in close proximity to one another (see col. 3 lines 8-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lynn, and have the plurality of wireless devices initiate operation of the first wireless roaming network when in close proximity, as taught by Borgstahl, thus allowing small personal area networks to be formed.

Consider claim 17, Lynn does not disclose the radios of the plurality of wireless devices each support a smart and dumb interface. Borgstahl discloses smart and dumb interfaces (see col. 5 lines 31-41). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lynn, and have the plurality of wireless devices incorporate smart and dumb interfaces, as taught by Borgstahl, thus allowing them to act as gateways.

4. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn in view of Borgstahl, as applied to claim 1 above, and further in view of Ramanathan et al. (5,850,592).

Consider claims 8-10, Lynn and Borgstahl do not explicitly disclose more than one of the plurality of wireless devices share beaconing responsibilities. Ramanathan discloses more than

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one of the plurality of wireless devices share beaconing responsibilities (see col. 2 lines 38-67, and col. 4 lines 13-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Lynn and Borgstahl, and have more than one of the plurality of wireless devices share beaconing responsibilities, as shown by Ramanathan, thus allowing any roaming device to become a control station.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nick Corsaro whose telephone number is (703)306-5616 . The examiner can normally be reached on from 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter, can be reached on (703) 308-6732 . The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Nick Corsaro



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